Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of screening an environmental library for an agent that modulates interaction of a first test protein linked to a DNA binding moiety and a second test protein linked to a transcriptional activation moiety, comprising

providing an environmental expression library containing a plurality of recombinant prokaryotic clones, wherein DNA for generating the library is naturally occurring and obtained from a mixed population of organisms;

co-encapsulating in a suitable microenvironment at least one of the prokaryotic clones and a second recombinant clone expressing a fluorescent protein, with the first test protein and the second test protein ~~in a suitable microenvironment~~; and

screening the microenvironment by fluorescence activated cell sorting (FACS) analysis to determine ability of an agent produced by the prokaryotic clone to modulate interaction of the first test protein linked to a DNA binding moiety with the second test protein covalently linked to a transcriptional activation moiety to produce a change in fluorescence of the ~~microenvironment~~ fluorescent protein, wherein the change indicates the presence of the agent.

2. (Original) The method of claim 1, wherein the agent is an enzyme or small molecule.

3. (Original) The method of claim 2, wherein the enzyme is selected from the group consisting of lipases, esterases, proteases, glycosidases, glycosyl transferases, phosphatases, kinases, mono- and dioxygenases, haloperoxidases, lignin peroxidases, diarylpropane peroxidases, epozide hydrolases, nitrile hydratases, nitrilases, transaminases, amidases, and acylases.

4. (Currently Amended) The method of claim 1, wherein the modulation inhibits the expression of a reporter gene controlled by the first protein or the second protein.

5. (Currently Amended) The method of claim 1, wherein the modulation enhances the expression of a reporter gene controlled by the first protein or the second protein.

6. (Canceled)

7. (Currently Amended) The method of claim 6, wherein the second recombinant ~~cell~~ clone is a eukaryotic cell.

8. (Currently Amended) The method of claim 6, wherein the second recombinant ~~cell~~ clone is a prokaryotic cell.

9. (Currently Amended) The method of claim 1, wherein the ~~micro-environment~~ microenvironment is a liposome, gel microdrop, bead, agarose, cell, ghost red blood cell or ghost macrophage.

10. (Original)The method of claim 9, wherein the liposomes are prepared from one or more phospholipids, glycolipids, steroids, alkyl phosphates or fatty acid esters.

11. (Original)The method of claim 10, wherein the phospholipids are selected from the group consisting of lecithin, sphingomyelin and dipalmitoyl.

12. (Original)The method of claim 10, wherein the steroids are selected from the group consisting of cholesterol, chlorestanol and lanosterol.

13. (Currently Amended) The method of claim [[6]] 1, wherein the fluorescent protein is a fluorescent dye, a bioluminescent material, a chemiluminescent material, or a fluorescent enzymatic substrate.

14. (Original)The method of claim 13, wherein the bioluminescent material is green fluorescent protein (GFP) or red fluorescent protein (RFP).

15. (Canceled)

16. (Previously Presented) The method of claim 1, wherein at least one test protein is derived from a mixed population of organisms.

17. (Previously Presented) The method of claim 1, wherein the DNA for generating the library is normalized.